

REMARKS/ARGUMENTS

Applicant responds herein to the Office Action dated October 27, 2003. A Petition for Extension of Time (one month) and the fee therefor are enclosed.

Preliminarily, the applicant notes with appreciation the indication that claims 2-6 and 8-12 are directed to patentable subject matter. Those claims have been rendered in independent form without any amendment and formal allowance thereof is presently requested.

Claims 1 and 7 stand rejected on grounds of obviousness over Akashi (5,615,399) in view of Iwasaki (5,497,215). Reconsideration of the rejection of claims 1 and 7 on the aforementioned basis is requested in view of the amendments to claims 1 and 7 and the following remarks.

The inventions in claims 1 and 7 achieve the objective of the invention of allowing automatic focusing of a camera utilizing the contrast measuring approach, but permitting the taking of measurements at as many points along the optical axis as possible previously, but at much greater speeds.

This accomplished in part by dividing the 2-dimensional CCD into groups of lines that are spaced from one another and at least partially interleaved with other groups. See an example of this feature illustrated in Figure 2.

Furthermore, the exposure period of these groups can be overlapped as illustrated in Figure 3 and correspondingly described in the specification. The entire calculation process speed is increased and the focusing at each position where calculations are made along the optical axis is not necessarily limited to one portion of the entire image.

In terms of the specific claim language, claim 1, for example, provides that the photoelectric conversion elements are arranged in a 2-dimensional array and are divided into "photoelectric conversion element groups, each group composed of combinations of lines spaced at specific intervals and at least partially interleaved with lines of other groups".

In addition, and as noted previously, claim 1 also calls for the charge accumulation timing of the different groups to proceed with different start timings.

Turning to the references, the Office Action concedes that the timing feature of claims 1 and 7 is not disclosed in the Akashi reference. Nonetheless, it is contended in the Office Action that the secondary reference to Iwasaki discloses such timing.

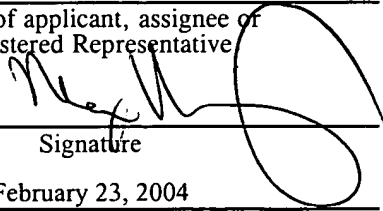
Respectfully, aside from the fact that the Iwasaki document does not at all address automatic focusing, it is of additional significance and a point which clearly causes claims 1 and 7 to distinguish over the prior art, that in both of the cited references, the groups of lines are located separately from one another with no overlap. See, for example, Figure 1 of Akashi and Figure 2 of Iwasaki. Indeed, Akashi simply does not at all address the problem, nor does it supply the solution of the present invention. The aim of this reference is to allow a focus detecting apparatus "in which when any area in a scene is designated and the focus state in that area is to be detected, the output from an area on the sensor corresponding to the designated area of a scene is read and processed on the basis of the information of the area sensor corresponding to the designated area of the scene pre-memorized in a memory circuit." (See the Abstract).

Given the problem and solution described in Akashi, i.e., which differs markedly from that of the present invention, it would not even be obvious to turn to the secondary reference to provide the missing timing feature from that secondary reference, when the secondary reference does not even deal with automatic focusing and does not even address the specific situation in Akashi.

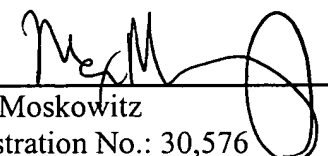
Accordingly, it is believed that it has been conclusively demonstrated above that the inventions of claim 1 and 7 are clearly definable over the prior art.

The Examiner is accordingly requested to reconsider the application, allow the claims as amended and pass this case to issue.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on February 23, 2004:

Max Moskowitz
_____ Name of applicant, assignee or Registered Representative
 _____ Signature
February 23, 2004 _____ Date of Signature

Respectfully submitted,

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